

microcomputer games[®]

NEWSLETTER

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THE AVALON HILL GAME COMPANY

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Dear Microcomputer Games Enthusiast:

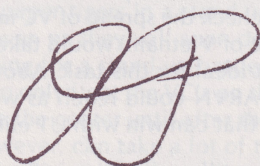
Here's your new Microcomputer Games Newsletter, so new in fact we suggest you wave it in front of your eyes a few times to make sure it actually has arrived and also that the ink has dried.

This will mark the last time we send one to you free of charge; all subsequent issues will cost you \$1.25 each or an annual subscription will cost you a paltry \$4.00 per year for this quarterly publication.

It has been "life in the fast lane" here ever since our first releases in June of 1980 and now that we have a line of 32 titles strong, we intend to slow down a bit and concentrate more on taking advantage of the unique capabilities of each individual microcomputer system we support.

July 26 was a big date for us because it signaled the beginning of the wargaming event of the year, ORIGINS '82. ORIGINS is actually the name for the national "adventure gaming" convention which was held this year at the University of Maryland in Baltimore County, next year's show will be held at Cobo Hall in Detroit. Although founded as a convention for board wargaming, the computer gaming part has grown substantially and surely will continue. We released our six new software games; ANDROMEDA CONQUEST, V.C., G.F.S. SORCERESS, MOON PATROL, TELEGARD and LEGIONNAIRE. There is more information about these games within this mailing.

Without further adieu, please read on and find out what our staff has in store for you.



Ogie Pincikowski
Editor

Two ARCADE PAK games for the VIC-20

SHOOTOUT AT THE O.K. GALAXY and **TANK ARCADE** in cassette form are now ready for the Commodore VIC-20 personal computer. These two games require 8K and 5K respectively. These are hand-eye coordination games and a departure from our strategy oriented releases. Still, they provide hours of enjoyment and challenge.

Chris Crawford's Newest Masterpiece

The man who makes the Atari personal computer sing, Chris Crawford has completed his newest wargame, **LEGIONNAIRE**. It is available only from Avalon Hill and is appearing now at leading computer stores everywhere.

LEGIONNAIRE is a real time wargame simulation of tactical combat in Ancient Caesar's time. You as Caesar command up to ten legions against up to sixteen barbarian hordes, 8 fighting as infantry and 8 as cavalry. There is nearly 25 square feet of full color mapboard stored within the computer's memory that scrolls (ala Crawford) with complete animation. The computer controls the barbarians in this solitaire contest where factors of shock effects, fatigue, morale and even slope effects have been programmed into this elegant game design.

If your favorite computer game dealer fails to have **LEGIONNAIRE**... ask him why not! You can order direct from Avalon Hill using our toll-free number (1/800/638-9292, ask for Operator P). This number is for credit card ordering only. You can order by mail by sending your check or money order. The 16K Atari cassette is available for \$35.00, the 32K Atari 800 diskette is yours for \$40.00. *Be sure to include an additional 10% for postage and handling whenever ordering direct from us.*

The Apple II 48K diskette version will be available before Christmas for \$40.00. This Apple version will utilize a revolutionary scrolling technique created by Avalon Hill's Apple II designer and programmer, David Kuijt.

Math for Space War Games

by Winchell Chung

Many budding young programmers are daunted by the seeming complexity of trigonometry, cartesian co-ordinates, rectangular to polar conversion, and other fun stuff. Unfortunately, any halfway decent space-war game demands such mathematical monsters. But all is not lost. As it turns out, the actual equations are not that bad. As long as you don't care **how** it works, you too can use the methods of higher math.

If it helps, the following formulas may be visualized as "black boxes". That is, as long as you know what to shovel in, and as long as the right answer comes out, one could care less about what's inside. Many of these very same formulas are used in some Avalon Hill computer games.

All games need maps. The most common way of stashing a map in the computer's memory is in a two-dimensional array. This is how the original "Star Trek" program laid out its quadrants and sectors. Simply define a character array in two dimensions (like: G\$(100,100)). The first number is the column,

the second is the row (In technical jargon, the column is called the "X co-ordinate" and the row is the "Y co-ordinate"). Randomly insert a few asterisks for stars, and voila! Instant galaxy.

Ships and other objects are other characters. To move them, print a blank in the array where they currently are, and print their symbol where they moved to.

Aha! First problem: how far is far? Say your dreadnaut is at 34,81; do you have enough energy to jump to 77,19? You have to know how far it is from one point to the next.

Put the ship's starting column in x1 and destination column in x2. Put the starting row in y1 and destination row in y2. The distance "D" is:

$$D = \text{SQR}((X1 - X2)^2 + (Y1 - Y2)^2)$$

That was painless, wasn't it? If you're getting fancy, and using three dimensions; put starting height in z1 and destination height in z2. Then:

$$D = \text{SQR}((X1 - X2)^2 + (Y1 - Y2)^2 + (Z1 - Z2)^2)$$

If you are going completely crazy, you are not limited to a mere three dimensions. Just slap on as many $+(a1 - a2)^2$ as you need. Hyperspace, anyone?

Uh-oh, a dreaded Blortch crusier just showed up on the scanner. Let's blow him away!

Most beam weaponry (at least in the real world) obeys an obnoxious rule known as the "inverse square law". It says that if you double the range, your beam strength is now 1/4th what it was. In practice, this makes for absurdly short range battles. But if you want to use it, put the beam's full strength in B, and the range (from the above formula) in D:

$$B = B/(D^2)$$

I usually just leave out the 2 . It makes for longer ranged battles.

Let's be nasty to the players, and make them have to put everything in by Range and Bearing! The way we've done it up to now is like telling the computer to move our ship to a certain numbered hex. The more realistic way is to tell it to go northeast for 300 feet. This is the infamous "Rectangular to Polar" conversion.

First, decide how far it is from one square to the next (call it a Light-year for now). For authenticity, let them input bearing by degrees (there ain't no north in space). To make it easier on me, 0 degrees is east, 90 degrees is north, 180 degrees is west, and 270 degrees is south. Have the player input range in R, bearing in B. Have his ship's row in Y1 and column in X1. His future position is:

$$X2 = \text{INT}((\cos(B * 0.01745) * R) + X1)$$

$$Y2 = \text{INT}((\sin(B * 0.01745) * R) + Y1)$$

The $*0.01745$ is because most computers use radians instead of degrees. If yours uses degrees, leave it out.

This should be enough to get you started. For more, hook a good calculus student. Get him to write the equations, label the variables, and you are ready to rid the universe of the Blortch Empire!

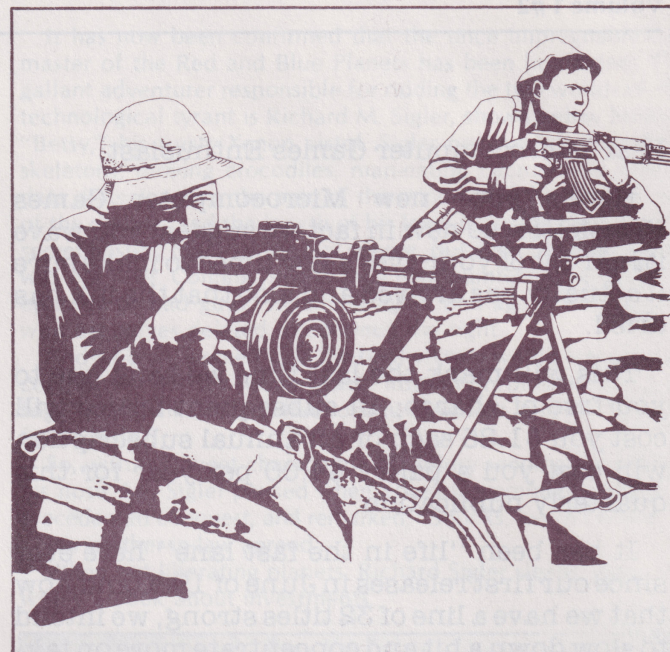
ADVANCED TACTICS IN VC or HOW TO WIN AT LEVEL 4

by David Kuijt

VC IS AVALON HILL'S TRADEMARK NAME FOR ITS COMPUTER GAME OF OPERATIONAL COMBAT IN VIET NAM

VC (Viet Cong) seems at first glance to be a game of guesswork. At the lowest level of difficulty the game can be won by moving the airborne battalion around until the VC are spotted. To win at the higher levels, however, the U.S. commander must have a detailed campaign plan from move one, as well as a knowledge of the peculiarities of all the units in the game, and how they can best be used or fought. This article will give some hints to those who have mastered the basic tactics of VC, but still have trouble winning at the tough levels of difficulty.

U1: The U.S. Airborne unit is easily the most powerful and mobile unit on the map, and therein lies an insidious trap. Many beginners will hop the Airborne battalion around like a flea on a frying pan, hoping to eliminate the VC with U1 virtually alone. This tactic will probably succeed at level one (as will almost any tactic), may succeed at level two, but at level three or four you will be signing your own death warrant.



There are three major faults with this singlehanded airborne assault. First, you can only jump in where there are no civilian populations. This means that the only way you can fight dense VC populations is by picking at the edges. Since solid blocks of civilians are the best breeding ground for VC, you will be allowing the VC in dense areas to convert civilians while picking up easy kills on isolated VC that have far less recruitment potential and are less crucial.

Second, you will never be sure, after you leave an area, that the civilians you left there have not been converted to VC since you left. This will mean that if you guess wrong once, you will have to search the whole map again to find the sneaky VC recruiting among your allies, giving him even more time to do his dirty work. You cannot afford to guess.

Finally, U1 is simply not strong enough to take on the whole province. As the level of difficulty increases, the number of VC and (shudder!) NVA (North Vietnam Army) increases also. At level four you may face six or more NVA and at least that many VC. U1 will be eliminated quickly facing that many enemies alone, and without U1 you will be giving away the outside of the map without a fight.

U1 is essential to victory, but you should be chary of sending it into hotbeds of VC just for the fun of slaughter. U1 should be used to check the spread of VC in areas that ARVNs (Army of the Republic of Vietnam) would take too long to reach. Its mobility makes it ideal for this task. Above all, never send it to a battle that an ARVN could reach as well. It is a very, very rare commander that can win with U1 eliminated.

U2: The artillery firebase is the keystone of a successful campaign at the higher levels of difficulty. It can attack units without fear of being damaged, even though it will not always destroy what it hits. A good rule of thumb for the artillery is NEVER FIRE AT UNIDENTIFIED CIVILIANS. Even if you suspect them to be VC, you cannot afford to be wrong. If you are sure, go ahead, but bombarding civilians is like cutting your own throat.

To use the artillery effectively, it is good to keep as many of the enemy spotted as possible, and to keep a rigid system of target priorities: fire first at NVA or VC that are in or adjacent to large groups of neutral or friendly civilians. Fire at NVA by preference, as they are much more likely to do nasty things to your troops in a combat than VC are, and the artillery is just as likely to damage either target. Remember, though, that you must damage an NVA unit twice to eliminate it, where a VC will be destroyed as soon as it takes any damage. Your last fire priority should be bombardment of NVA or VC that are away from civilians. They have no opportunity to recruit, so are relatively harmless. If you have no other targets, fine.

ARVN's: These troops, being your most numerous, will form the backbone of your campaign. They are slow, not very powerful, and fairly easy to eliminate. They can, however, identify adjacent friendly civilians. This makes them invaluable. As you move out your ARVNs they will leave a path of identified friendly civilians. The most important thing about ARVNs is that it is necessary to get them out of their square formation as fast as possible. Start by moving the corner ones (R0, R3, R6, R9) diagonally outwards from the center. Whenever possible, move ARVNs diagonally rather than orthogonally, as they will meet (and identify) more unidentified units that way. Avoid moving ARVNs adjacent to one another, for the same reason. Be ready to use your artillery support to swat anything the ARVN meets that gives it any trouble. You cannot afford to let your ARVNs get into tight spots unless you like to have them destroyed. Try to surround pockets of resistance rather than leaping in without knowing how many VC are in there. Avoid NVA like the plague, as you cannot afford to take equal casualties. If you find NVA, flatten them with artillery or pop the airmobile over to them (if necessary).

Civilians: A common mistake among beginners is to think of civilians as being sort of superfluous, merely providing an environment for the battle to be fought in. The sign of a good commander is the information he gleans from the movement of civilians, especially friendly civilians. This is where the main use of ARVNs comes to the fore. Friendly civilians act as a sort of intelligence gathering method. If you see a Friendly civilian move into a group of neutral (unidentified) civilians and stay friendly, you know that there are no VC or NVA among those civilians. Conversely, if an unidentified civilian moves adjacent to a group of friendly civilians and they are neutralized or eliminated, it is pretty obvious that the moving unit is a VC or NVA. It is possible to know the general locations of all the major pockets of VC by the eighth or ninth turn by careful interpretation of the results of the movements of your friendly civilians.

The Enemy: NVA are the big danger. They will cause you an immense amount of grief, as they are tough and cannot be easily killed. With a little bad luck U1 can die very quickly fighting a few NVA battalions. If you simply attack them by sending your ARVN's, you can figure on losing one ARVN for each NVA you attack. These casualties are not acceptable. To take NVA on you must use your artillery as much as possible. Note that the delay caused by this can often make a commander lose a game by spending too much time on a few NVA.

VC are weak, disorganized, paper tigers in a stand up battle. Do not let this fool you, however, as they will soon defeat the commander who keeps searching for a stand up battle. One of the best tactics to use in VC is to only fight the VC's on the edges of an 'infestation', and to leave the center until after there is no threat of it spreading. This, however, can take a lot of time.

As a final bit of advice, use your S2 intelligence report carefully. Your battalion intelligence is not always accurate, but it will give you a fair approximation of the forces opposing you. Take it with a grain of salt, however, as many commanders have been fooled into overconfidence or despair by the intelligence report, when they still had a good chance of winning. Take care, and don't let the enemy get you down.

IN THE WORKS

Avalon Hill's newest Atari programmer on board is Winchell Chung. He is currently putting finishing touches on a monster Napoleonic game entitled *PARIS IN DANGER*.

Initially available for the Atari 800 (disk only) *PARIS IN DANGER* has a unique morale system encompassing both strategic and tactical elements of play. This wargame will focus on Napoleon's 1814 campaign.

David Kuijt is finishing up his incredible adaptation of *LEGIONNAIRE* for the Apple II. Simultaneously, he has been using the same scrolling technique for a sophisticated arcade-strategy type game tentatively titled *AIR CALVARY*. He won't say much at this point except that it takes place in the future on a distant planet and that it combines elements of three of his favorite coin-op machine games!

COMPUTER FACTS IN FIVE will be available for the beer and pretzel gamers shortly after New Years. This is a computerization of Avalon Hill's best selling "Leisure Time" game. It is a unique game of knowledge and excellent for solitaire, doubles, or even party mode. Available for IBM P.C., Apple and Atari.

FREDERICKSBURG—computer and board game combination of tactical battle during the American Civil War. Available only for the TRS-80 Models I & III, *Fredericksburg* is a two player game where each player will take the role of Confederate General Robert E. Lee or Union General Ambrose E. Burnside in this historical simulation which was a debacle for the Union in their march onto Richmond.

GYPSY—Reinhard Mirkovich has created a most loveable moth, if only the ants and bumble bees in pursuit felt the same way! Available for the Atari 4/800 by Xmas, a TI 99/4A version is expected shortly after New Years.

B-1 NUCLEAR BOMBER—If you saw the original... you won't recognize Ron Sutherland's enhanced version for the IBM P.C. B-1 is also planned to be released before Xmas for TI 99/4A and Sinclair Timex ZX81.

SUBMITTING COMPUTER GAMES FOR EVALUATION

by Michael G. Cullum

While Microcomputer Games has an outstanding staff of programmers devoted to the creation and development of new microcomputer games, we are always willing to evaluate programs submitted to us by outside programmers. We firmly believe that in order to keep our computer game line fresh and original a very liberal program submission policy is necessary.

Unlike most other computer software companies, Microcomputer Games does not have extensive submittal procedures. In fact, many programmers have sent games to us for evaluation without any prior contact whatsoever. While we would prefer some prior contact, either by phone or letter, submitting a program to us cold does not affect our evaluation of it. It is best to contact us first, this way we can prepare an appropriate playtest group and tell you right off a number of specifics such as; whether the configuration of your program is compatible with our computer system or even if we already have a similar program in the works.

Currently we support the Apple II, Atari 400/800, IBM P.C., Commodore '64 and PET, TRS-80 Models I and III, TRS-80 Color, and VIC-20. We also plan to support in the near future the TI 99/4A and Sinclair Timex ZX81. To support all of the above computers is a big job that requires both a lot of effort and cost on our part. Hence we must be very selective as to what programs are marketed.

Computer games submitted to Microcomputer Games are evaluated by an in-house staff of playtesters consisting of game designers, developers, programmers and computer game enthusiasts. One of the first things our evaluators look for when they playtest a game are loading and playing instructions. You would be surprised by how many programmers submit games to us with no loading or playing instructions. It is very difficult to evaluate a game if you cannot load it or figure out how to play it.

Also, a lack of loading and playing instructions is usually a good indication as to what we can expect in the way of program documentation if we do elect to market the game. Because we convert most of our programs to play on more than one computer, documentation is very important. So when a computer game arrives without loading and playing instructions, it already has one strike against it.

Next we check to see if the program is a complete game. Many of the programs submitted to us are only boardgame player assist aids. So far, we have not found a market for game assist programs. When a consumer purchases a computer game, he does not want to have to buy a boardgame in order to play it, or does he? Occasionally a listing and commentary of a boardgame computer assist program is printed in one of our magazines, but these should be submitted as magazine articles to The Avalon Hill editorial staff.

Once the program has been loaded, the playing instructions digested and it has been determined that it is a complete game, the real evaluation begins. Generally we look for smoothness of game flow, realism where applicable, presentation of information, ease of learning, difficulty to win, sound and GRAPHICS DISPLAY. Because of the current "state of the art" of microcomputer games, one of the greatest determinant factors in selecting a computer game for marketing is its graphic displays. No matter how good the game may be, unless it has some sort of graphic display, preferably Hi-Res, it too has a strike against it. The only exception to this is the computer/boardgame combination game which has done very well. Following closely behind the graphic display in importance are the sound effects in the game. Though this is not as important on some computers (TRS-80) as on others (Atari).

We also try to make a determination as to the level of interest, challenge and enjoyment the average consumer would get from the program. Finally we determine if the game is original and not just a take off or copy of some other computer game, and if it is based upon a boardgame, that it does not infringe upon another company's copyrights. As a rule, programs borrowing conceptually upon another company's game will not be marketed by us.

After all of the playtesters have evaluated the program, a decision is made to either send a contract or a reject letter to the programmer. Rejected games are maintained in our files for one year and then destroyed. Programmers that want their game submission returned should enclose a stamped self-addressed envelope with their submission. If you would like to submit a program to Microcomputer Games for evaluation contact either Jack Dott or Mike Cullum at Microcomputer Games, Inc., A Division of The Avalon Hill Game Co., 4517 Harford Road, Baltimore, MD 21214.

The End

★★★★★ OVERMIND ★★★★★
★★★★★ UNDERMINED ★★★★★

It has now been confirmed that the once impregnable evil master of the Red and Blue Planets has been liquidated! The gallant adventurer responsible for ridding the two worlds of the technological tyrant is Richard M. Sigler, shown below holding "Betsy," his trusty Xenon pistol. Sigler persevered, destroying skeletons, moving crocodiles, man-eating cactus, and several data disks; ignoring the pain of the mind-whip, the depredation of the deserts, and the length of his lawn to finally discover the secret nesting place of the evil sphere. But even then, the battle was not over. Coming face-to-face with quintessential evil, the epitome of bad guys, Sigler fell again and again, only to rise with expletives deleted to continue the fight.

And when it seemed that the final victory would forever successfully evade his weary grasp, inspiration blossomed in his fogged brain like Alka Seltzer on raw meatloaf, and he closed in for the kill!!!

So, with the sweet champagne of victory sending bubbles up his nose, Mr. Sigler paused when asked to comment on his unprecedented conquest, and remarked, "Shucks, twern't nothin'."

His mother-in-law agreed.

When not liberating planets, Richard Sigler sleeps, eats, and writes a book about investments.



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